

Plasmavision™
PDS6101W/E-H
PDS6101W/E-S

SERVICE MANUAL

FUJITSU GENERAL Proprietary

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FUJITSU GENERAL LIMITED

SPECIFICATIONS

Power requirement	100-240V, 50/60Hz
Current drain	7.5A
Display panel	
Screen size	131.1 (W) x 76.0 (H) [cm] 53.1 (W) x 29.9 (H) [inch]
Aspect ratio	16 : 9
Number of pixels	1,365 (H) x 768 (V) pixels
Pixel pitch	0.99mm x 0.99mm
Contrast ratio	PDS6101 700 : 1 (typ.)
Brightness	600 cd/m ² (typ.)
Viewing angle	Max. 160 degrees
Input Terminals	
Video input	BNC connector 1.0V _{P-P} /75Ω
S video input	S terminal Y signal:1.0V _{P-P} /75Ω C signal:0.286V _{P-P} /75Ω
Component video input	Three BNC terminals Y : 1V _{P-P} /75Ω P _b /B-Y: 0.7V _{P-P} /75Ω P _r /R-Y: 0.7V _{P-P} /75Ω
RGB 1 input	DVI-D terminal
RGB 2 input	mD-sub:15pin (3 row type) Video : 0.7V _{P-P} /75Ω SYNC signal : TTL level
RGB 3 input	BNC terminal x 5 R: 0.7V _{P-P} /75Ω G: 0.7V _{P-P} /75Ω B: 0.7V _{P-P} /75Ω H: TTL level or 0.3V _{P-P} /75Ω V: TTL level or 0.3V _{P-P} /75Ω
User set mode	8 memories (each RGB1,2)
Display frequency	Horizontal :15.63 to 80.0MHz Vertical : 50.0 to 120Hz Dot clock:50MHz Max XGA 68MHz Max
RS-232C	D-sub 9 pin terminal
Color system	NTSC/PAL/SECAM/N-PAL/M-PAL /4.43NTSC/PAL60
Audio input	2 pin terminals(one system) 500mVrms/22kΩ
Effective max. output	Level terminal 20W+20W (L/R), 4Ω
Display colors	16.7 million (256 each for R.G.B.)
Dimensions	Width : 145.2cm (57.1 inch) Height: 86.2cm (33.9 inch) Depth : 11.9 cm (4.7 inch)
Net weight	61.0kg

Environment (Operating)	
Temperature	0° to 40°C
Relative humidity	20 to 80%
Pressure	850 to 1,114 hPa

Accessories	User's manual Remote controller Batteries (Type AA x 2) Power cord Big Ferrite core (2) Small Ferrite core (2)
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Options	
Stand	P-50TT01
Wall mounting unit	P-50WB01 installation angle Horizontal 0° to 15° Vertical 0° to 5°
Ceiling mounting unit	P-50CT01 installation angle Available 0° to 15°

Standards	
PDS6101W/E-H/S	
• UL,CSA	
Safety:UL1950	
CSA C22.2 No.950	
EMC: FCC Part15 Class A	
ICES-003 Class A	
• CE	
Safety: EN60950	1992
	A1 1993
	A2 1993
	A3 1995
	A4 1997
EMC : EN55022	A1/A2
Class A	
EN61000-3-2,	1995
EN61000-3-3,	1995
EN55024	1998
EN61000-4-2,	1995
EN61000-4-3,	1996
EN61000-4-4,	1995
EN61000-4-5,	1995
EN61000-4-6,	1996
EN61000-4-8,	1993
EN61000-4-11,	1994
• AS	
Safety : IEC950 A1/A2/A3/A4	
EMC : AS/NZS 3548	

SETTING SIGNALS

This display can store parameter settings for eight additional signals for RGB.

To do this, select the desired signal and follow "RGB MODE ADJUSTMENT" in the manual to adjust the parameters. When you finish, the settings will be automatically stored.

FACTORY SET SIGNALS (RGB MODE)

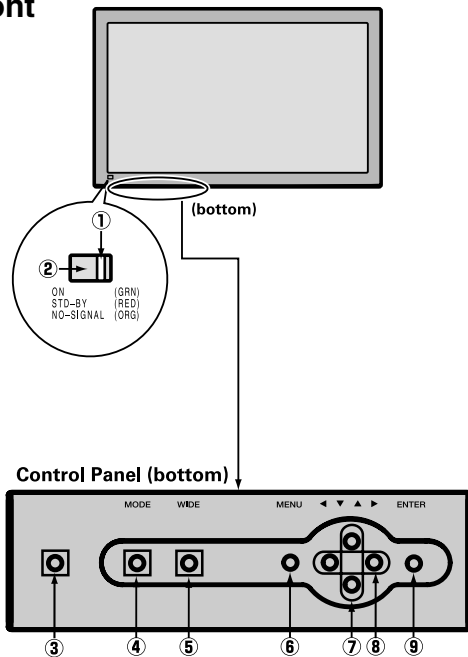
Main corresponding signals (RGB mode)

Display (dots x lines)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal	DVD-I
640 x 480	31.47	59.94	VGA	○
640 x 480	37.86	72.81	VGA 72 Hz	
640 x 480	37.50	75.00	VGA 75 Hz	
640 x 480	43.27	85.01	VGA 85 Hz	
720 x 400	31.47	70.09	400 lines	
800 x 600	37.88	60.32	SVGA 60 Hz	○
800 x 600	48.08	72.19	SVGA 72 Hz	○
800 x 600	46.88	75.00	SVGA 75 Hz	
800 x 600	53.67	85.06	SVGA 85 Hz	
1024 x 768	48.36	60.00	XGA 60 Hz	○
1024 x 768	56.48	70.07	XGA 70 Hz	
1024 x 768	60.02	75.03	XGA 75 Hz	
1280 x 1024	63.98	60.02	SXGA 60 Hz	
1280 x 1024	79.98	75.03	SXGA 75 Hz	
1600 x 1200	75.00	60.00	UXGA 60 Hz	
1600 x 1200	93.75	75.00	UXGA 75 Hz	
1600 x 1200	106.25	85.00	UXGA 85 Hz	
640 x 480	35.00	66.67	MAC 13RGB	
848 x 480	31.02	60.00		○
852 x 480	31.72	59.97		
720 x 485	15.73	59.94	60 fields	
720 x 575	15.63	50.00	50 fields	
640 x 400	31.50	70.15	NEC 31 kHz	

* With some input signals, "Out of range" may appear even when the horizontal and vertical frequencies are within their permissible ranges. Make sure that the vertical frequency of the input signal is 85 Hz or less for SVGA, 75 Hz or less for XGA/ SXGA , 60 Hz or less for UXGA.

PART NAMES AND FUNCTIONS

Front



① Power indicator lamp

This lamp shows the state of the power supply.

- Lit (red): Power OFF (stand-by)
- Lit (green): Power ON
- Lit (orange): Power saving (DPMS: Power saving function) mode ON
- Flashing (red): Malfunction (Flashes differently depending on the type of malfunction).

② Remote control signal receiver

Receives signals from the remote control.

③ Power button

Turns the power ON or OFF (stand-by).

④ Input mode selector button [MODE]

Switches between picture input modes.

⑤ Wide screen selector button [WIDE]

Switches the screen over to a desired wide screen.

⑥ Menu button [MENU]

Displays picture adjustment menus.

⑦ Adjustment buttons [▼ / ▲]

The [▼ / ▲] buttons can also be used to scroll through the options when a menu is displayed.

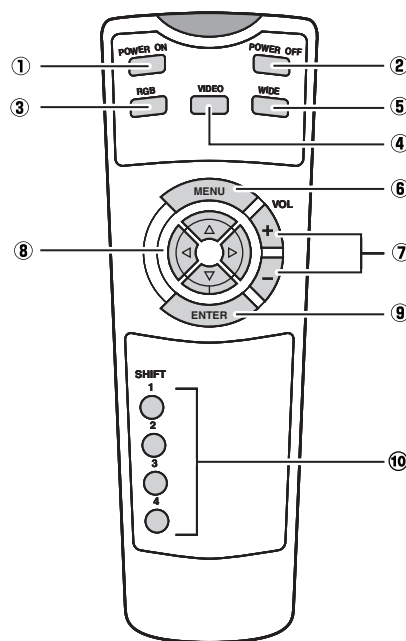
⑧ Adjustment buttons [◀ / ▶]

The [◀ / ▶] buttons can also be used to scroll through options in a menu, or to change values.

⑨ Enter button [ENTER]

Press this button to finalize the selection of a desired option in a menu.

Remote control



① Power ON button [POWER ON]

Turns the power ON.

② Power OFF button [POWER OFF]

Turns the power OFF.

③ RGB input mode selector button [RGB]

Switches between RGB input modes.

④ Video input mode selector button [VIDEO]

Switches between video input modes.

⑤ Wide screen selector button [WIDE]

Switches the screen over to a desired wide screen.

⑥ Menu button [MENU]

Use this button to display a desired menu for adjusting the picture.

⑦ Volume adjustment buttons [VOL +/-]

Adjust the volume.

Press the + button to increase the volume.

Press the - button to reduce the volume.

⑧ Adjustment buttons [◀ / ▶ / ▼ / ▲]

Use these buttons to scroll through options in a menu and change values.

⑨ Enter button [ENTER]

Press this button to finalize the selection of a desired menu or option within a menu.

⑩ Display selector buttons [SHIFT 1-4]

When you use two or more displays, you can use these buttons to control up to four displays by assigning an unique number to each display.

TROUBLESHOOTING USING LED AND OSD

1. Display

(1) OSD

Two kinds of error messages are displayed on the screen, and the power is turned off 10 sec later.

(2) LED

LED error is displayed continuously after the power is turned off.

2. Error types and check points

(1) OSD

On screen display	Cause	Check point
ERROR MESSAGE CONDITION 1	Fan protector operated	<ul style="list-style-type: none">● Fan● Main power PCB● Main/Digital PCB
ERROR MESSAGE CONDITION 2	Temperature protector operated	<ul style="list-style-type: none">● Ambient temperature of unit● Main/Digital PCB● Temp. sensor IC757

(2) LED

LED lamp display status	Cause	Check point
Steady light (Red)	Stand-by status	-----
Continuous Flashes continuously (Red)	No power Power supply protector operated	<ul style="list-style-type: none">● Main power PCB● PDP panel
1 time Flashes once every 4 sec. (Red)	Fan protector operated	<ul style="list-style-type: none">● Fan● Main power PCB● Main/Digital PCB
2 times Flashes twice every 5 sec. (Red)	Temperature protector operated	<ul style="list-style-type: none">● Ambient temperature of unit● Temperature sensor IC757● Main/Digital PCB
4 times Flashes four times every 7 sec. (Red)	Main/Digital circuit faulty	<ul style="list-style-type: none">● Main/Digital PCB
5 times Flashes five times every 8 sec. (Red)	Video circuit faulty	<ul style="list-style-type: none">● Video PCB Assy

V_s AND V_d ADJUSTMENT

When the Main Power Supply PCB and PDP panel are replaced, V_s and V_d must be adjusted.

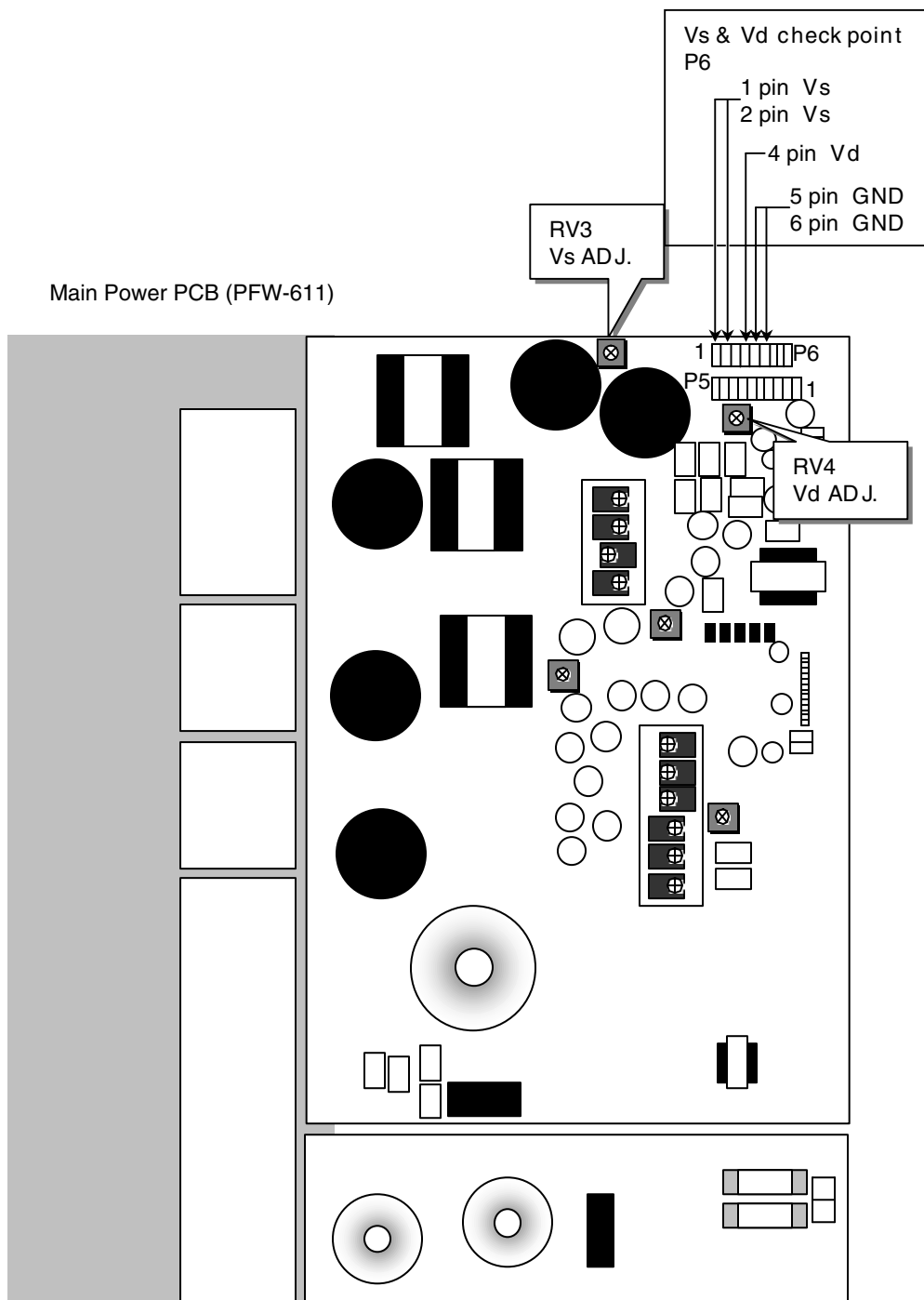
Adjustment time Within 3 minutes after power on.

Adjustment signal Adjust the V_s and V_d in the no-signal state.

Check points Refer to the drawing shown below.

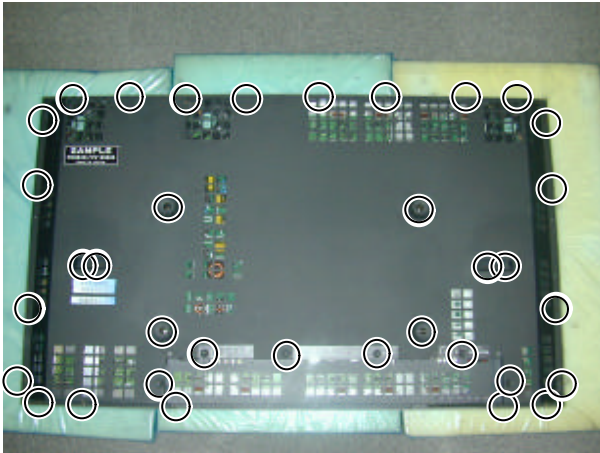
Adjustment points Refer to the drawing shown below.

Adjustment value Within +/- 0.1V of voltage indicated on the label on the PDP panel.



DISASSEMBLY PROCEDURES

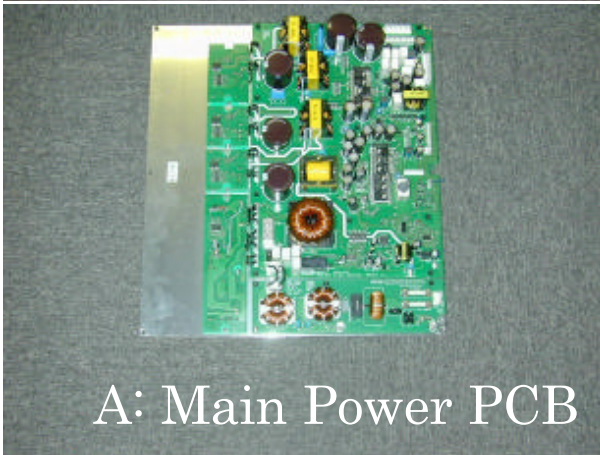
1.Removing the Rear Case



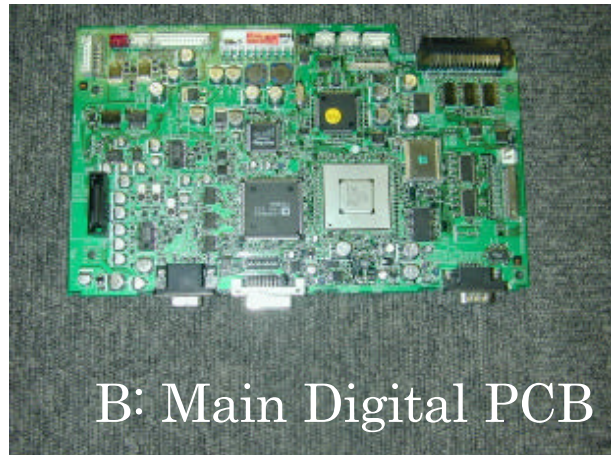
1) Remove the 35 circled screws and remove the Rear Case.



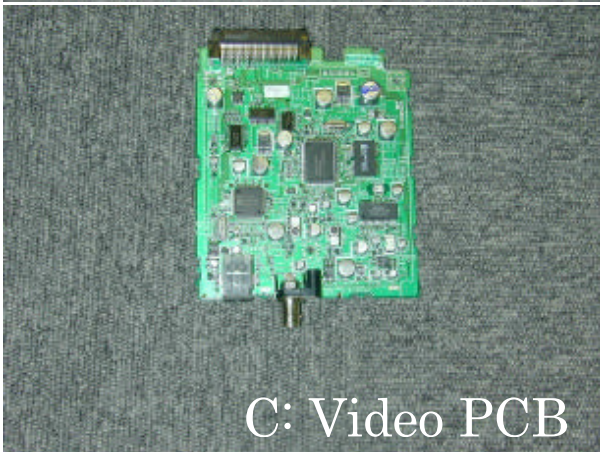
* Layout of Main PCB.



A: Main Power PCB



B: Main Digital PCB



C: Video PCB



D: Audio PCB

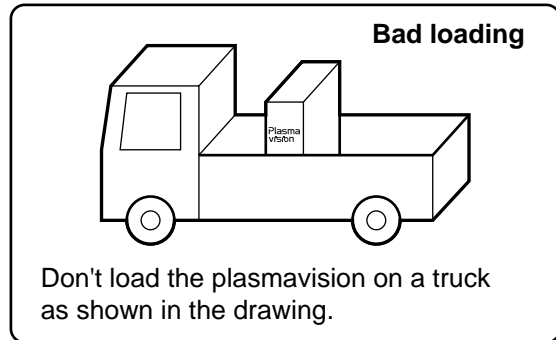
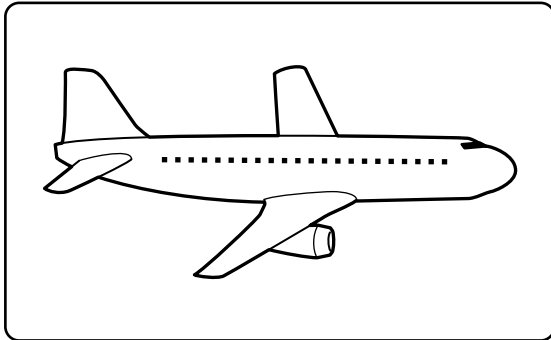
PARTS LIST

Ref.no.	Description	PDS6101W-H	PDS6101E-H	PDS6101W-S	PDS6101E-S
Cabinet	Case Front	8113312003	←	8113386004	←
	Case Rear	8113294002	←	←	←
Electric	Fan Motor	8900295007	←	←	←
	Optical Filter	8113178005	←	←	←
	Audio PCB Assy	8113276008	←	←	←
	Connection PCB Assy	8113282009	←	←	←
	I/O PCB Assy	8113284003	←	←	←
	Key Switch PCB Assy	8113280005	←	←	←
	LED/PHOTO PCB Assy	8113278002	←	←	←
	Main Digital PCB Assy	8113102000	←	←	←
	Video PCB Assy	8113274004	←	←	←
	Main Power PCB Assy	8113268003	←	←	←
	PDP Unit	8113269000	←	←	←
	Noise Filter	0400222729	←	←	←
	Power Cord UL.CSA	8112528009	-----	8112528009	-----
	VDE	-----	8112527002	-----	8112527002
	Remote Control Unit	8108442005	←	8110867001	←
Packing	Carton Top	8113316001	←	←	←
	Carton Bottom	8113317008	←	←	←
	Packing Joint-D	8108655009	←	←	←
	Packing Pad-Top	8113320008	←	←	←
	Packing Pad-Bottom	8113321005	←	←	←
	Carton Accessory	8111799004	←	←	←

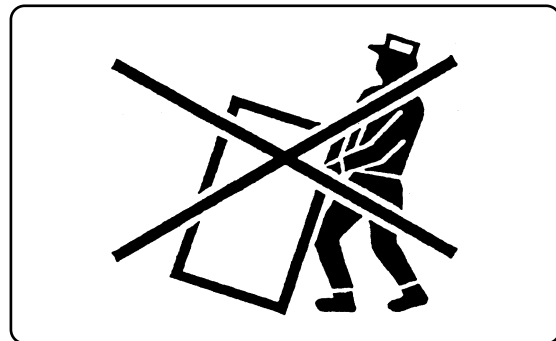
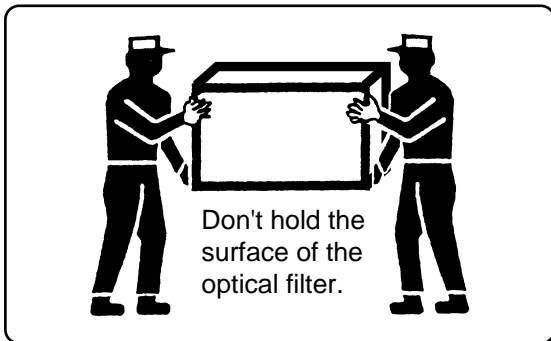
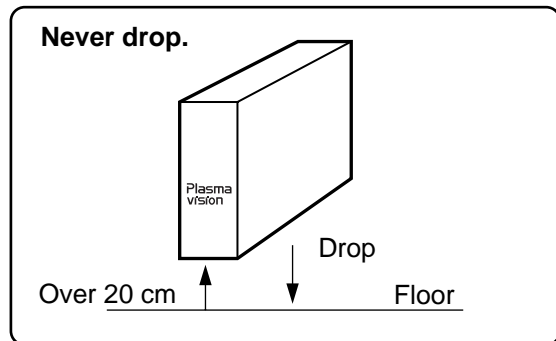
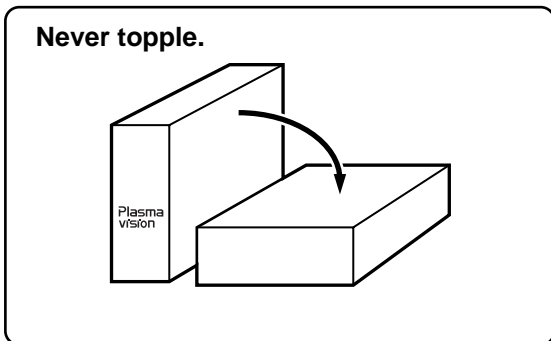
← : Same as left

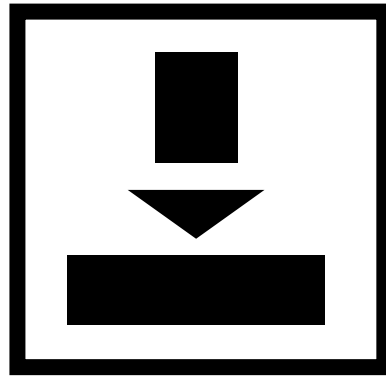
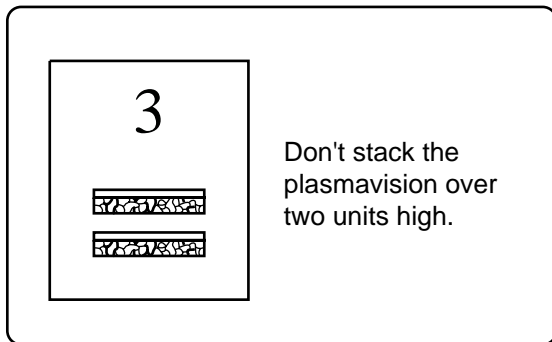
TRANSPORTATION AND HANDLING RESTRICTIONS

Transportation

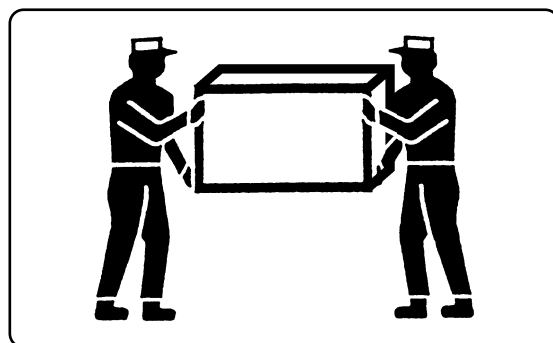
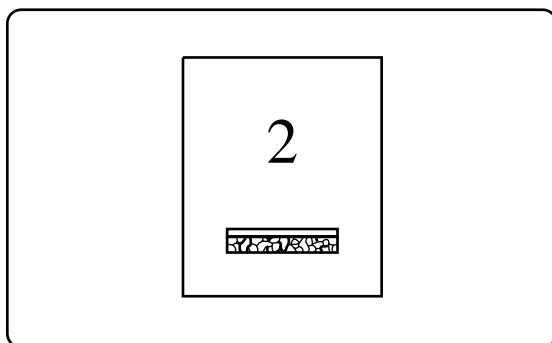
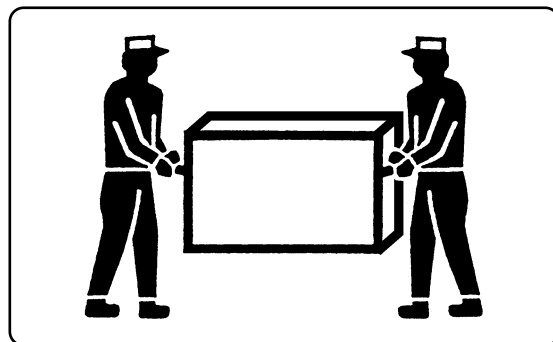
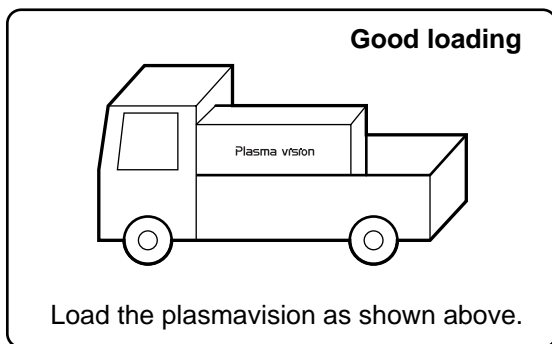


Handling

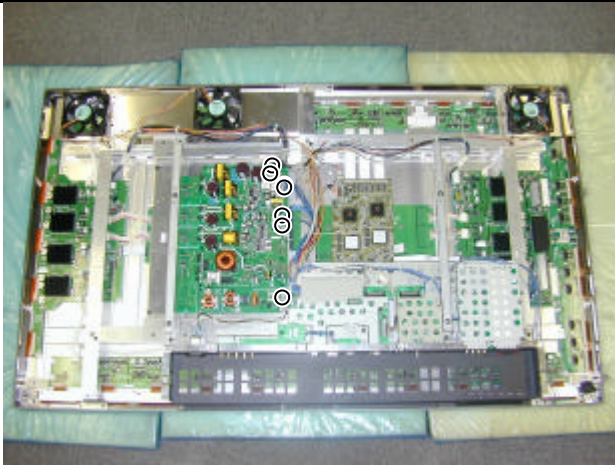




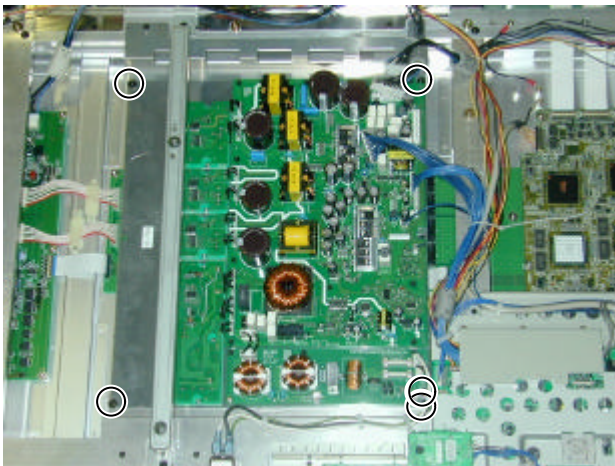
Example of good transportation and handling



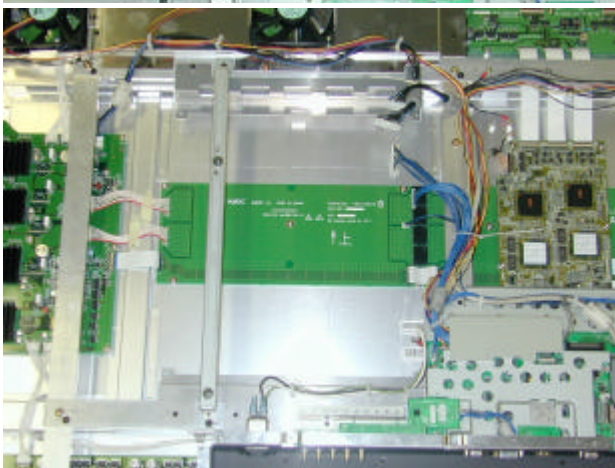
2. Removing the Main Power PCB



- 1) Remove the Rear Case.
- 2) Disconnect the circled connector.

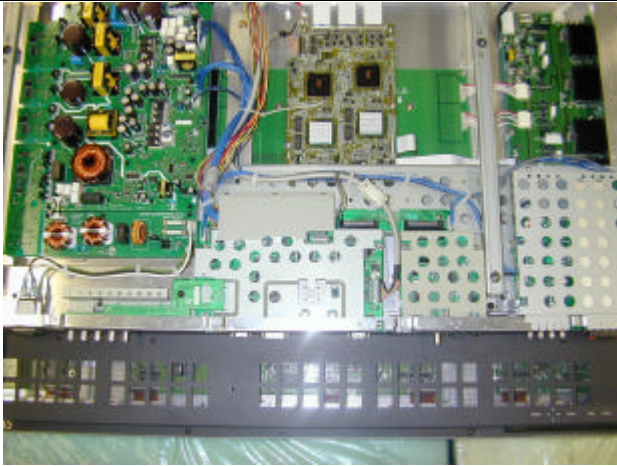


- 3) Remove the 5 screws and Main Power PCB.

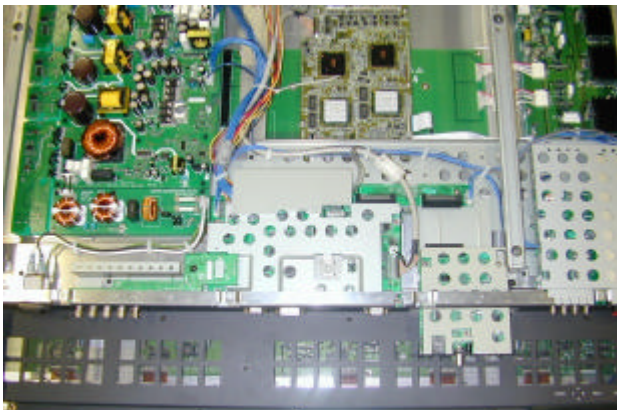


* View after Main Power PCB removed.

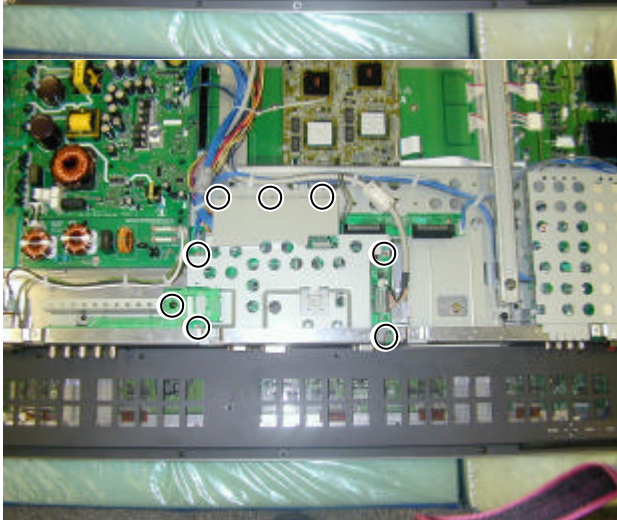
3. Removing the Main Digital PCB (1 of 2)



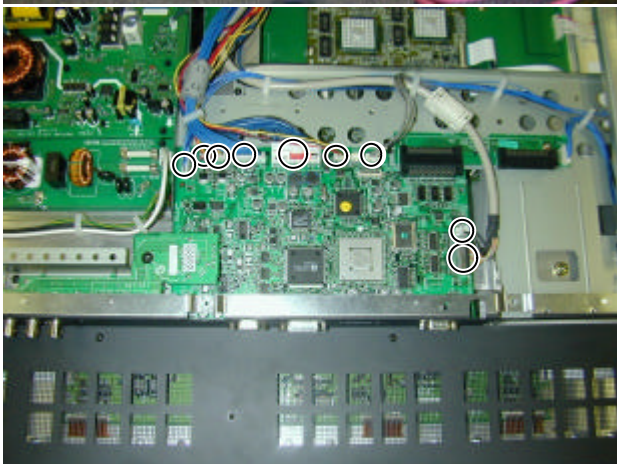
1) Remove the Rear Case.



2) Remove the Video Unit.

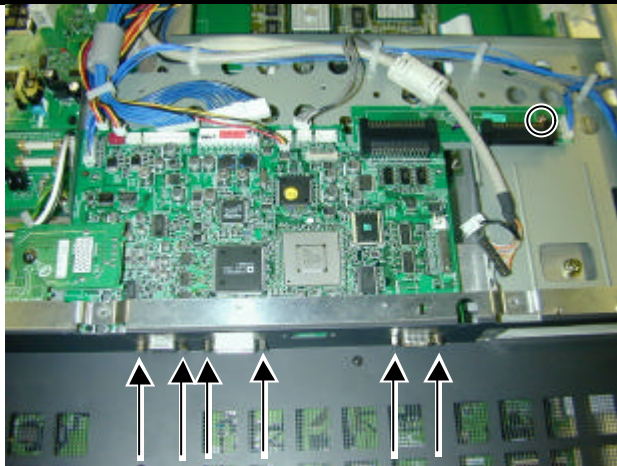


3) Remove the 8 screws and Main Digital Shield Bracket.



4) Disconnect the circled connector.

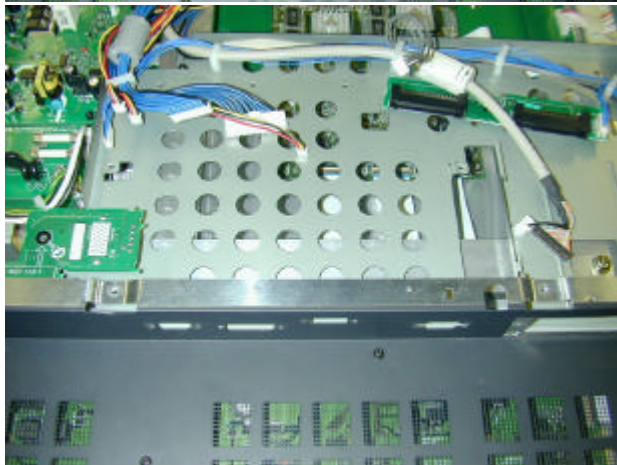
3. Removing the Main Digital PCB (2 of 2)



5) Remove the 7 screws and connection PCB.

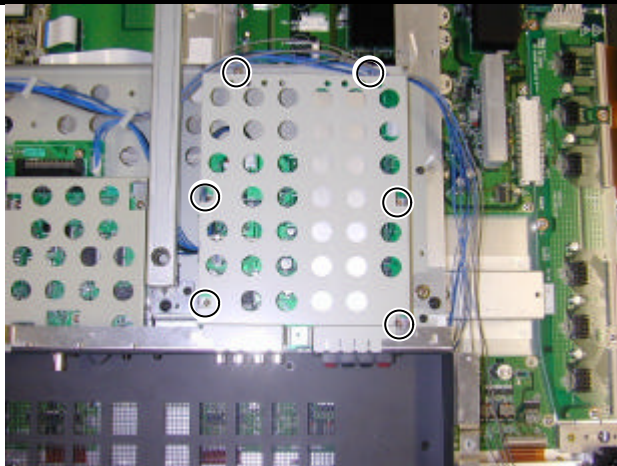


6) Remove the Main Digital PCB.



* View after Main Digital PCB removed.

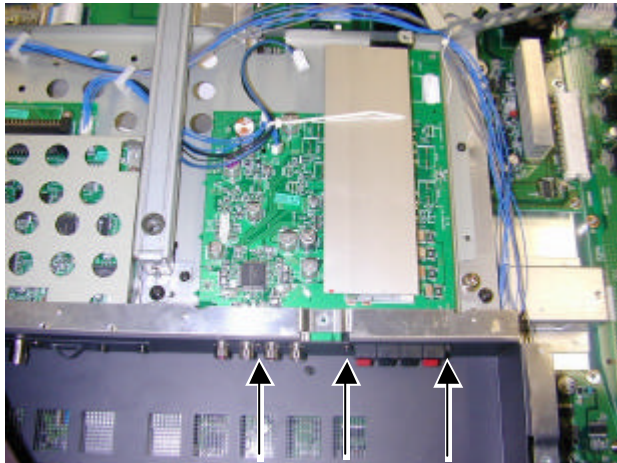
4. Removing the Audio PCB



- 1) Remove the Rear Case.
- 2) Remove the 6 screws and Audio Shield Bracket.



- 3) Disconnect the circled connector.

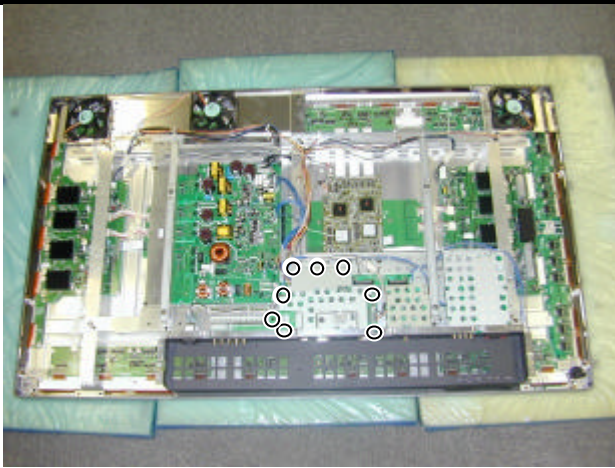


- 4) Remove the 3 screws.



* View after Audio PCB removed.

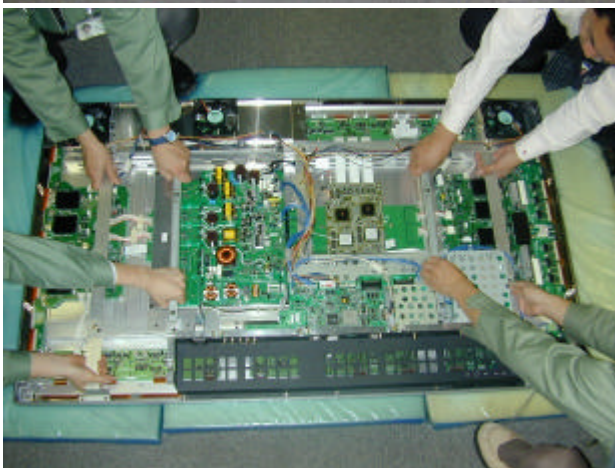
5. Removing the PDP Unit (1 of 3)



- 1) Remove the Rear Case.
- 2) Remove the 8 screws and Main Digital Shield Bracket.



- 3) Disconnect the circled connector.



- 4) Remove the Base Frame from the Front Case together with panel and PCBs.



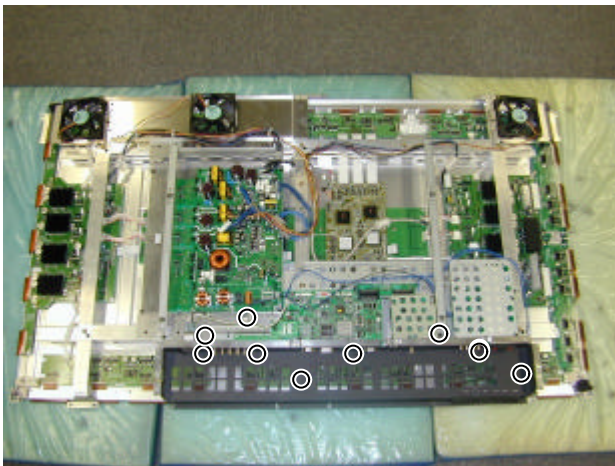
* View of removal of the Base Frame from the Front Case.

5. Removing the PDP Unit (2 of 3)

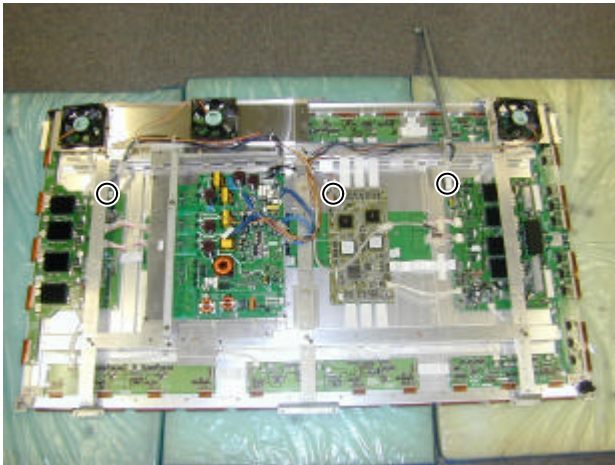


* View after the Front Case Panel Unit and PCBs removed.

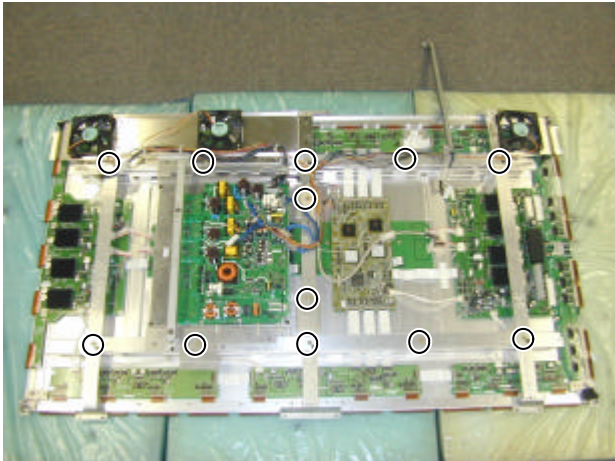
5) Disconnect the circled connector.



6) Remove the 9 circled screws.

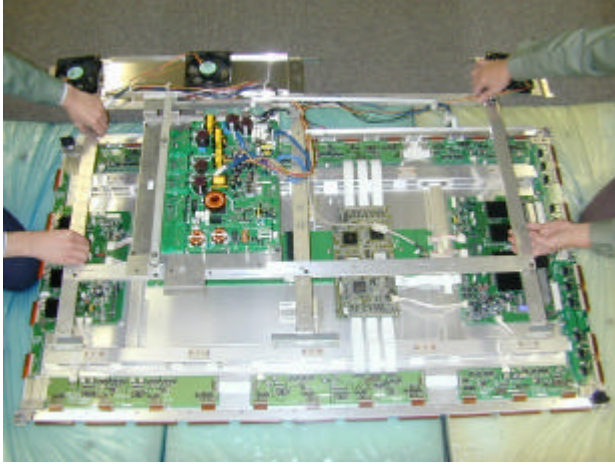


7) Disconnect the circled connector

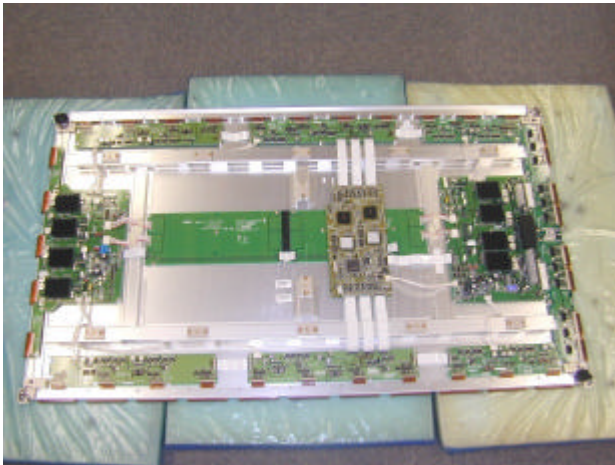


8) Remove the 12 circled screws.

5. Removing the PDP Unit (3 of 3)



* View after the PDP Unit Frame and PCBs removed.



* View after only the PDP Unit removed.

* Replaced the parts which are already mounted correctly, when the PDP Unit is replaced.

6. Removing the Video PCB

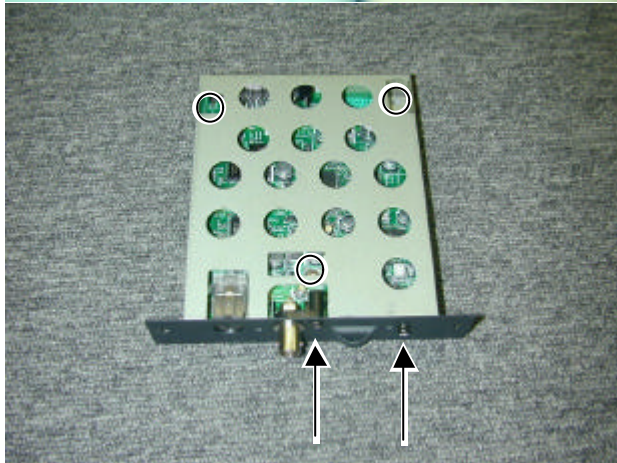


* The Video PCB can be removed without moving the Rear Case.

1) Remove the 2 circled screws.



2) Pull out the Video PCB Unit from the Plasmavision.

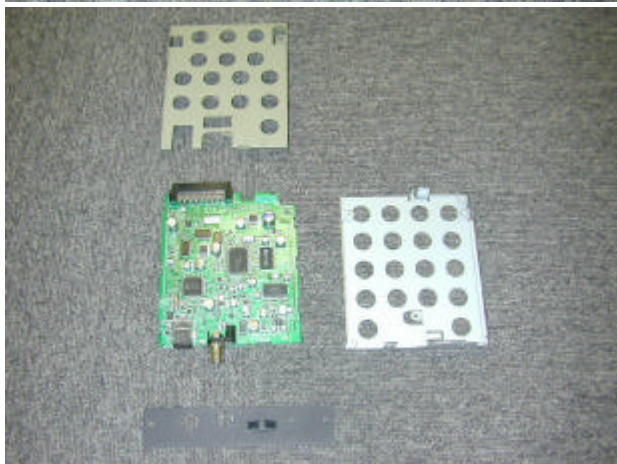


3) Remove 5 screws from the Video PCB Unit.

Note:

Three kinds of screws are used on this Video Unit.

Be careful not to make any mistakes When reinstalling.

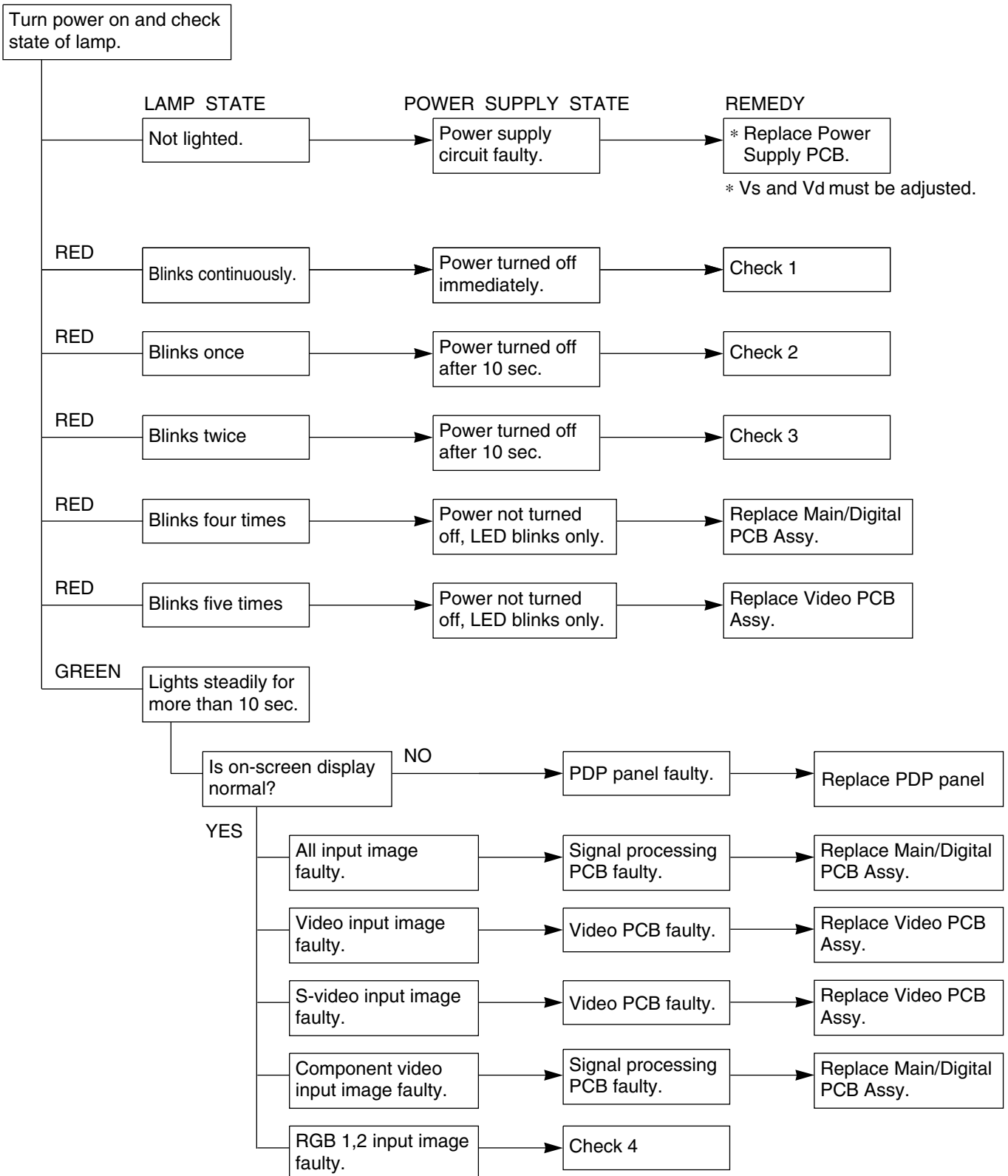


4) Remove the Video PCB.

TROUBLESHOOTING FLOWCHART

LED lamp blinking

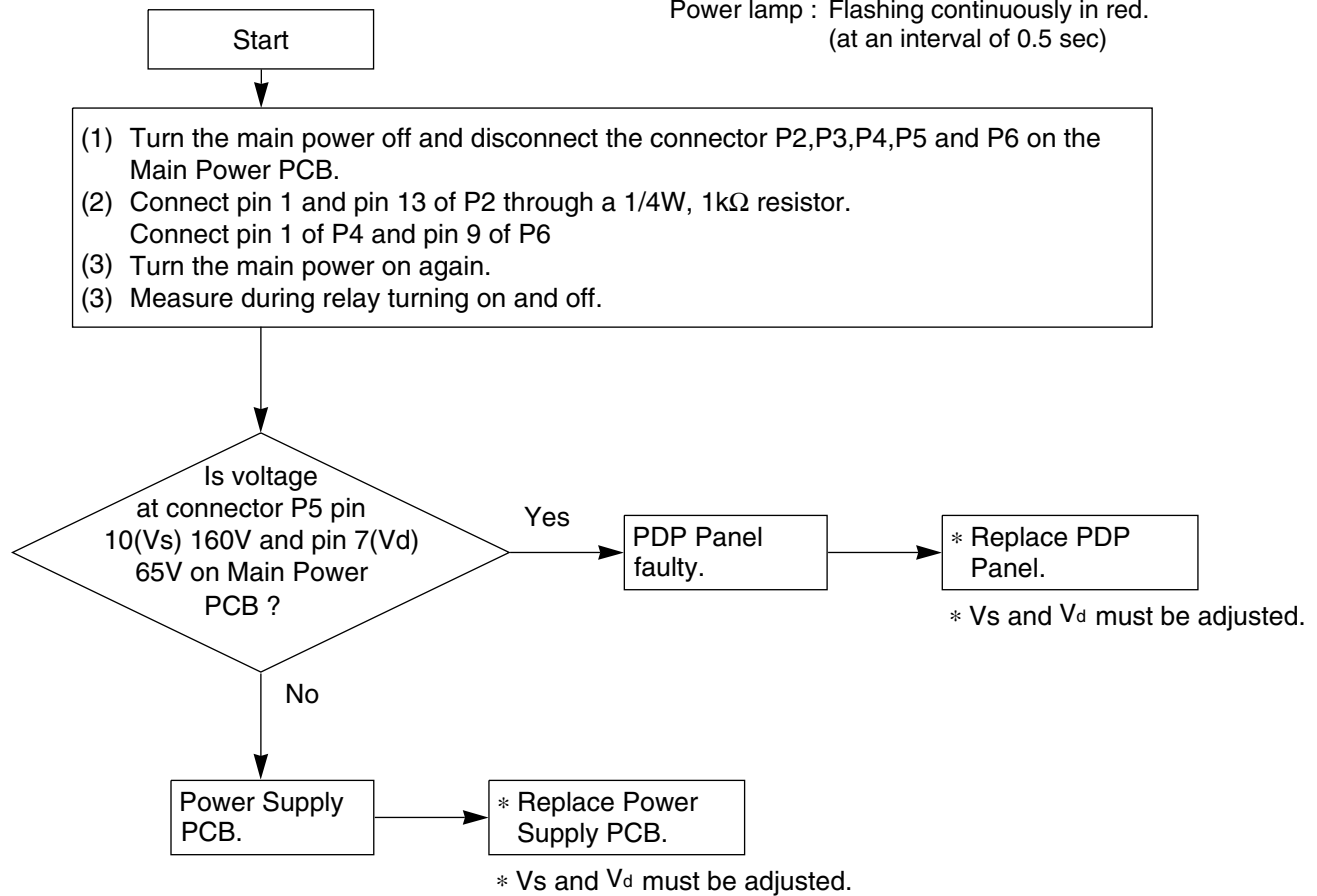
Note : 1. Protector operates when connector P4(CN4) is disconnected and power is turn off.



Check 1

Power supply protector operated

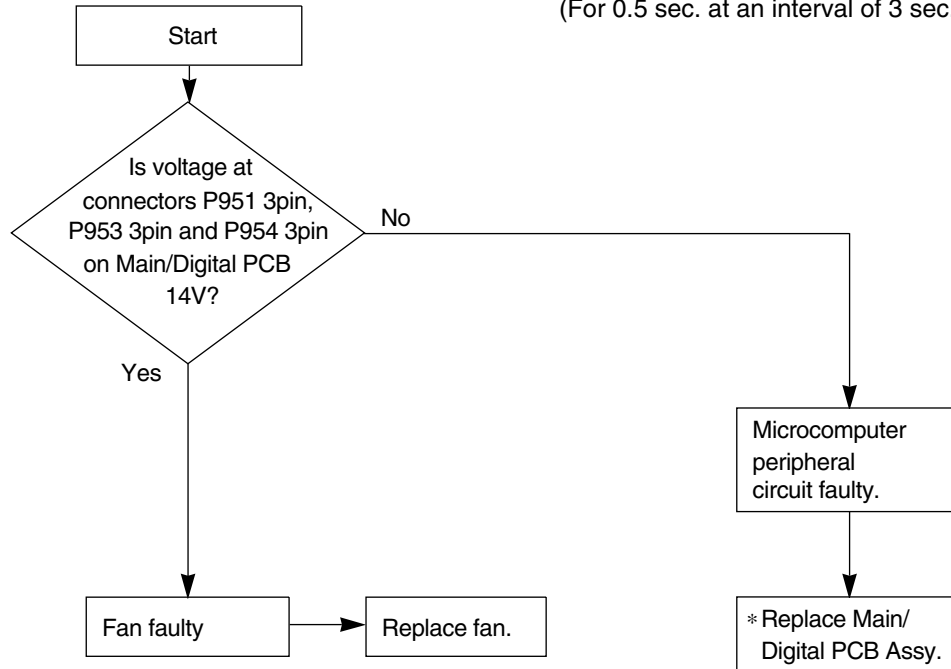
Power lamp : Flashing continuously in red.
(at an interval of 0.5 sec)



Check 2

Fan protector operated

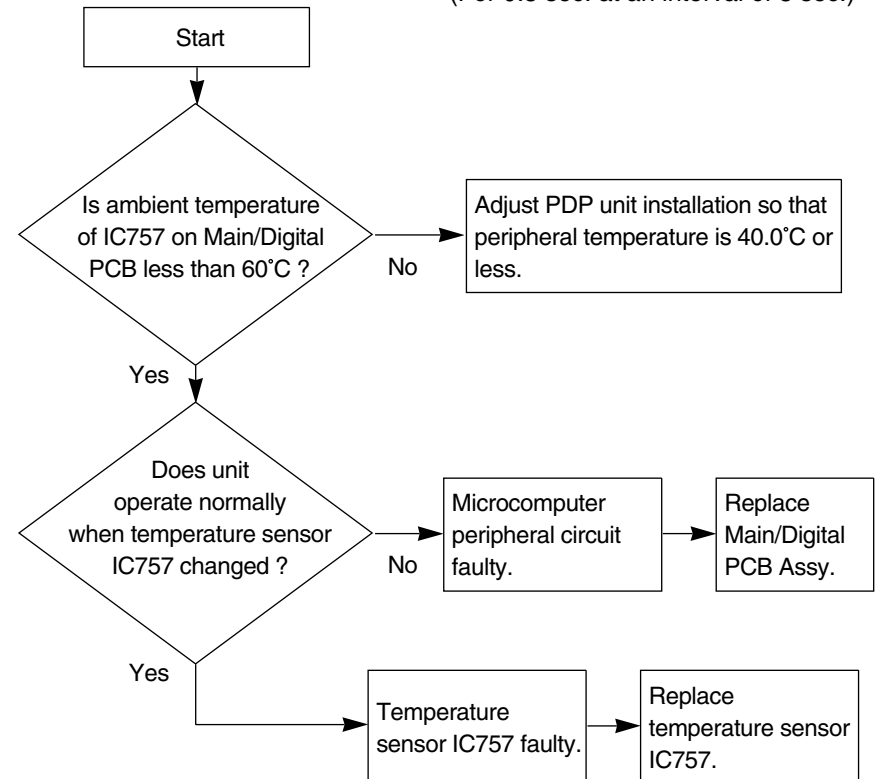
Power lamp: Flashes once intermittently in red.
(For 0.5 sec. at an interval of 3 sec.)



Check 3

Temperature protector operated

Power lamp : Flashes intermittently twice in red.
(For 0.5 sec. at an interval of 5 sec.)

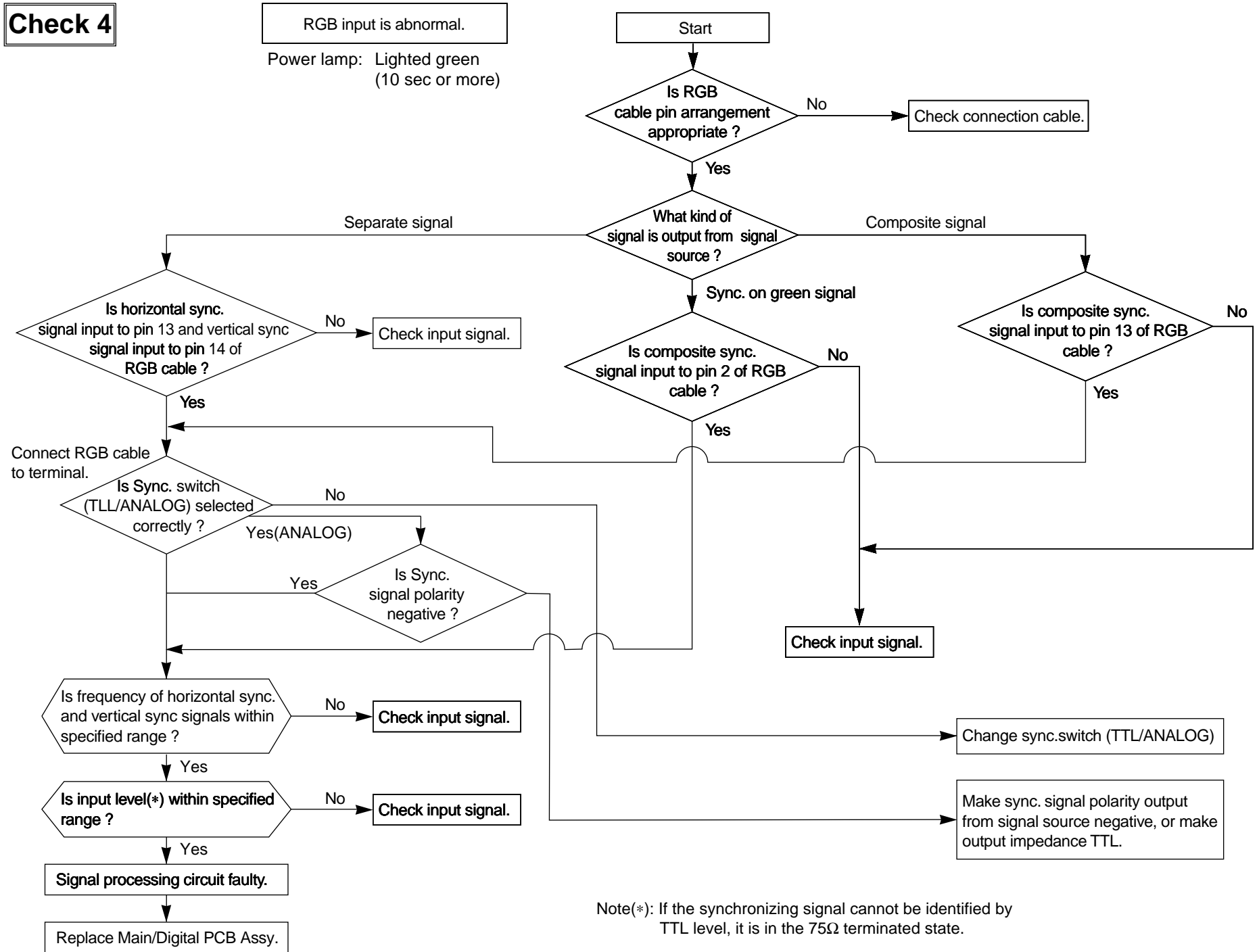


Temperature sensor cooling

The temperature sensor IC757 is installed
on Main/Digital PCB. Turn the power off
and cool with a point cooler.

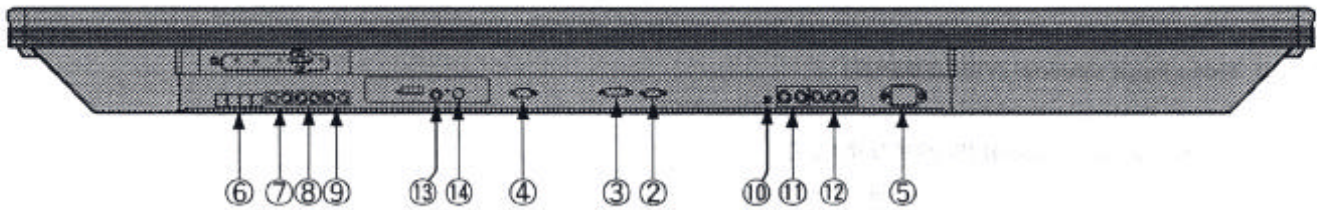
Check 4

RGB input is abnormal.
Power lamp: Lighted green
(10 sec or more)



Note(*): If the synchronizing signal cannot be identified by TTL level, it is in the 75Ω terminated state.

Bottom (61")



② RGB 2 input terminal (RGB 2 INPUT/mD-sub)

Connect this terminal to the PC's display (analog RGB) output terminal or decoder (digital broadcast tuner, etc.) output terminal.

③ RGB 1 input terminal (RGB 1 INPUT/DVI-D)

Connect this terminal to the PC's display (digital RGB) output terminal

*The connection cable No.88741-8000 made by **molex Inc.** is recommended.

④ RS-232C terminal (RS-232C)

This terminal is provided for you to control the display from the PC. Connect it to the RS-232C terminal on the PC.

When connecting a cable, attach a ferrite core to the cable.

⑤ Power input terminal

Connect this terminal to the power cable supplied with the display.

When connecting a cable, attach a ferrite core to the cable.

⑥ External speaker output terminal (EXT SP)

Connect this terminal to the optionally available speaker.

(When using other speaker than the optional one, use 6Ω speaker.

When connecting a cable, attach a ferrite core to the cable.

*See the speaker instruction manual for more information.

⑦ Sound 3 input terminal (AUDIO 3 INPUT)

Connect this terminal to the sound output terminal of your VCR, etc.

⑧ Sound 2 input terminal (AUDIO 2 INPUT)

Connect this terminal to the sound output terminal of your VCR, etc.

⑨ Sound 1 input terminal (AUDIO 1 INPUT)

Connect this terminal to the sound output terminal of your VCR, etc.

⑩ RGB 3 synchronization switch (SYNC SW TTL/ANALOG (75Ω))

This switch is used to terminate horizontal (H) terminal and vertical (V) terminal, out of RGB3 input terminals, with 75Ω.

☐ TTL : Does not terminate.

☐ ANALOG (75Ω) : Terminates.

⑪ + ⑫ RGB 3 input terminal (RGB 3 INPUT/BNC)

Connect this terminal to the PC's display (analog RGB) output terminal or decoder (digital broadcast tuner, etc.) output terminal.

⑫ Component video input terminal (COMPONENT VIDEO INPUT)

Connect this terminal to the component video output (color difference output) terminal of your HDTV unit or DVD player.

* When Comp.video input terminal is connected, RGB3 mode is not available.

⑬ Video input terminal (VIDEO INPUT)

Connect this terminal to the video output terminal of your VCR.

⑭ S-video input terminal (S-VIDEO INPUT)

Connect this terminal to the S-video output terminal of your VCR.

FACTORY SET SIGNALS (Component video mode)

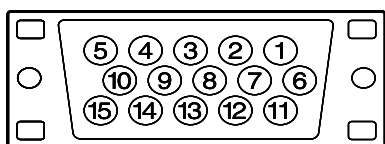
Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal
15.73	59.94	SDTV 480i
15.63	50.00	SDTV 576i
31.47	59.94	SDTV 480p
31.25	50.00	SDTV 576p
45.00	60.00	HDTV 720p
37.50	50.00	HDTV 720p
33.75	60.00	HDTV 1,080i
28.13	50.00	HDTV 1,080i

FACTORY SET SIGNALS (Video, S-video mode)

Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal
15.73	59.94	NTSC
15.63	50.00	PAL
15.63	50.00	SECAM
15.63	59.52	PAL 60
15.63	50.00	N-PAL
15.73	59.95	M-PAL
15.73	59.94	4.43 NTSC

- The dedicated graphics card is optional.
- In the 800 x 600 and 1,024 x 768 modes, images of reduced size are displayed on the screen, using size reduction and interpolation. Also note that on-screen information is also displayed in reduced size.
- "Out of range" appears if the display receives a signal whose characteristic does not fall within the display's permissible range.
- You can check the input signals with "Information" on the OTHERS Menu screen.

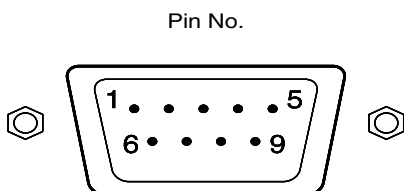
RGB INPUT TERMINAL



* The sync switch (TTL/ANALOG switch) is on the rear of the 13-pin horizontal sync and 14-pin vertical sync terminals.

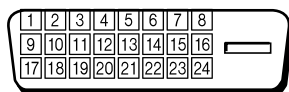
Pin No.	Input signal	Pin No.	Input signal
1	Red	9	Ground
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	Ground
5	Ground	13	Horiz. sync
6	Ground	14	Vert. sync
7	Ground	15	Ground
8	Ground	Outer side	Ground

RS-232C INPUT TERMINAL



Pin No.	No. signal
1	DCD (Data Carrier Detect)
2	RD (Receive Data)
3	TD (Transmit Data)
4	DTR (Data Terminal Ready)
5	GND (Ground)
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI (Ring Indication)

DVI-D INPUT TERMINAL



Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	—	12	—	20	—
5	—	13	—	21	—
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Ground(for +5V)	23	T.M.D.S. Clock +
8	—	16	Hot Plug Detect	24	T.M.D.S. Clock-

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IMPORTANT INFORMATION

WARNING : TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Please use a screen saver to prevent burning of an after-image on the screen.

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. But **IMPROPER USE CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARD.** In order not to defeat the safeguards incorporated into this unit, observe the following basic rules governing its installation, use and service. Please read these "Important Safeguards" carefully before use.

Read all the safety and operating instructions before operating the unit.

Retain the safety and operating instructions for future reference.

Adhere to all warnings on the unit and in the operating instructions.

Follow all operating instructions.

Unplug the unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

Do not use attachments not recommended by the manufacturer as they may be hazardous.

Do not use the unit near water. Do not use the unit immediately after moving it from a low temperature to a high temperature environment, as this causes condensation, which may result in fire, electric shock, or other hazards.

Do not place the unit on an unstable cart, stand, or table. The unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Mount the unit according to the manufacturer's instructions, using the mount recommended by the manufacturer.

When the unit is used on a cart, avoid quick stops, excessive force, and uneven surfaces which may cause the unit and cart to overturn, damaging the unit or causing possible injury to the operator.

When transporting by car, place the unit as shown in the figure.



Slots and openings in the cabinet are provided for ventilation. These ensure reliable operation and protect the unit from overheating. These openings must not be blocked or covered. (The openings should never be blocked by placing the unit on a bed, sofa, rug, or similar surface. The unit should not be placed in a built - in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions are adhered to.) For proper ventilation, separate the unit from other equipment, which may obstruct ventilation. Keep the unit at least 10cm from other equipment.

Operate only with the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

This unit is equipped with a three-wire plug. This plug will fit only into a grounded power outlet. If you cannot insert the plug into the outlet, have an electrician install the proper outlet. Do not defeat the safety purpose of the grounded plug.

Route power cords so that they are not likely to be walked on or pinched by items placed on or against them. Pay particular attention to cords at doors, plugs, receptacles, and where they exit from the unit.

For added protection during a lightning storm, or when the unit is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cabling. This will prevent damage to the unit by lighting and power line surges.

Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in fire or electric shock.

Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-circuit parts that could result in a fire or electric shock. Never spill liquid of any kind onto the unit.

